THE COST SAVING IN VALUE ENGINEERING EXERCISE IN CONSTRUCTION CONTRACTS

AMRUL DUNAL

A thesis submitted in fulfillment of the requirements for the award of the degree of Master of Science (Construction Contract Management)

Faculty of Built Environment
Universiti Teknologi Malaysia

August 2012
DECLARATION

I declare that this thesis entitled "The Cost Saving in Value Engineering Exercise in Construction Contracts" is the result of my own research except as cited in the references. The thesis has not been accepted for any degrees and is not concurrently submitted in candidature of any other degree.

Signature: AMRUL DUNAL
Name: AMRUL DUNAL
Date: 28/8/2012
DEDICATION

“To my beloved wife Indirasati, and my family”
ACKNOWLEDGMENT

First and foremost, I would like to express my sincere gratitude and highest appreciation to my supervisor Mr. Jamaludin Yaakob for his times, precious guidance, valuable advice, and inspiring encouragement throughout this project. His guidance has motivated and helped me lots especially to develop an understanding of the subject and in presenting my writing for the research. The completion and successful of this project would have been impossible without his assistance and guidance.

Special thanks also to all the lecturers in course of Master of Science in Construction Contract Management for their support during the process of completing the master course.

I am also indebted to PT. Wijaya Karya (Persero) Tbk who give me a scholarship to take Master Study on Construction Contract Management at University Teknologi Malaysia (UTM). I would like to express my gratitude to Management and all colleagues in PT. Wijaya Karya (Persero) Tbk who give support to complete the master course.

Lastly, I would like to express my gratitude and sincere thanks to everyone who has involved in this thesis writing and throughout the accomplishment of my research.
ABSTRACT

On the project, design improvement is related to the value engineering. According to Kelly, J., Male, S., and Graham, D., (2004), value engineering is the process of making explicit the functional benefits a client requires from the whole or parts of a project at an appropriate cost during design and construction. Value engineering can be implemented into the public projects (county, city, state, and federal) and private sector entities in design and build. Project types can include any facility or structure type, such as bridges, highways, buildings, hospitals, schools, court facilities, mass transit facilities, water treatment plants, and marine facilities. In relation to a construction project, a value engineering exercise may result in a variety of changes in the contract documents which may reduce costs, improve or maintain project quality, and/or decrease the duration of construction. For the purpose of this research, the focus is relating to cost saving or cost reduction as one of the important benefits from value engineering. The problem arises when the value engineering exercise is done by the contractor in design and build contract. The contractor, with his own idea, has taken the value engineering review at the construction phase. The issue is who will enjoy the cost saving from value engineering. This research will be analyzed based on the literature such as reference books, articles, journals, seminar papers, legal cases, related website, etc. The analysis is divided into two phases. One is before award phase, and two, is after award phase. This research analyzed a live project, the Project of Jetty and Marine Work for PLTU (Coal Fired System Power Plant) 2 Labuhan, Banten (2 x 300 MW), Indonesia. So the result of this research can identify the party who will enjoy the cost saving from value engineering in construction project. For example, before award phase, the employer is the party who will enjoy the cost saving from value engineering, and after award phase, with value engineering clause, when the contractor initiative the value engineering to modify design, generally the cost saving from value engineering will be shared between the employer and the contractor.